

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>			1. CONTRACT ID CODE		PAGE OF PAGES 1      5	
2. AMENDMENT/MODIFICATION NO. <b>96</b>		3. EFFECTIVE DATE See Block 16C		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. (If applicable)
6. ISSUED BY John F. Kennedy Space Center, NASA Procurement Office – ODIN – OP-OS-ODIN Kennedy Space Center, FL 32899		CODE		7. ADMINISTERED BY (If other than Item 6)		CODE
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State, and Zip Code)  OAO Corporation 7375 Executive Place Seabrook, MD 20706-2278				(x)		9A. AMENDMENT OF SOLICITATION NO.
						9B. DATED (SEE ITEM 11)
						10A. MODIFICATION OF CONTRACT/ORDER NO.  <b>NAS5-98144/CC90303B</b>
						10B. DATED (SEE ITEM 13)  December 1, 2001
CODE		FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS						
<p>[ ] The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers [ ] is extended, [ ] is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:</p> <p>(a) By completing Items 8 and 15, and returning ____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.</p>						
12. ACCOUNTING AND APPROPRIATION DATA (If required)						

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.	
	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
<b>X</b>	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: <b>NAS5-98144 Contract Clause C.7 Technology Refreshment Process and FAR Clause 52.212-4 Contract Terms and Conditions-Commercial Items, (c) Changes</b>
	D. OTHER (Specify type of modification and authority)
E. IMPORTANT: Contractor [ ] is not, [ <b>X</b> ] is required to sign this document and return <u>  1  </u> copies to the issuing office.	
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)	

## Stennis Space Center --- ODIN SERVICES

Technology Infrastructures: SWRs XJCS 3N43 00 and XJCS 3N44 00

Change in Delivery Order Price: \$197,546.11 (INCREASE)

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print) Keith L. Spencer Sr. Contracts Manager		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Penelope A. Ebright Contracting Officer	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED
(Signature of person authorized to sign)		BY (Signature of Contracting Officer)	

1. In accordance with Master Contract NAS5-98144, C.7, Technology Refreshment Process, the technology refreshment services referenced below is hereby incorporated into this Delivery Order at a fixed price of \$197,546.11

SWR #	Subject	Amount
XJCS 3N43 00	Install (1) 48 singlemode/24 multimode fiber cable from B1201 to B3225B to support communications for NASA	\$ 82,198.22
XJCS 3N44 00	Install fiber and copper cable between 3225A and B3225B to B4010 to support communications for NASA	\$115,347.89
	<b>TOTAL</b>	\$197,546.11

## 2. SWR XJCS 3N43 00

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to install 48 singlemode/24 multimode fiber between B1201 and

B3225B to support communications for NASA as identified in OAO proposal dated August 19, 2003.

a. The contractor shall perform the following tasks:

- (1) Install (1) 48 singlemode/24 multimode fiber cable from room 116 in B1201 out through existing duct bank to the new communications room in B3225B.
- (2) Install (2) 19" x 84" aluminum equipment racks in B3225B.
- (3) Install (3) double sided vertical troughs on the equipment racks.
- (4) Install 12" overhead cable tray from existing cable tray across the aluminum equipment racks to be used for outside cables and indoor cables.
- (5) Install (1) LGX panel equipped with 1000St panels and ST couplers in B1201 and (1) LGX panel in B3225B.
- (6) Terminate fiber into ST connectors and put in LGX panels at both buildings.
- (7) Test and label fiber at both buildings.
- (8) Provide red line drawing showing route taken with fiber to LMIT so that site drawings can be updated.

b. The contractor shall provide the following material:

- (1) 12,500 feet of 48SM/24MM fiber cable (072XW4-TBD)
- (2) 144 each cool cure consumables (142172)
- (3) 96 each P3020A-C-125 singlemode ST connectors (157475)
- (4) 96 each C3000-A2 singlemode ST couplers (105263)
- (5) 48 each P2020C-C-125 multimode ST connectors (170290)
- (6) 48 each C2000A multimode ST couplers (088987)
- (7) 8 each CPI runway support brackets (037964)
- (8) 7 each CPI 12" wall angle support (034158)
- (9) 6 each CPI 12" cable runway (034636)
- (10) 4 each CPI butt splice kit (034154)
- (11) 3 each double sided vertical trough (166031)

- (12) 3 each CPI junction splice kit (034155)
- (13) 2 each 19" x 84" aluminum racks (086047)
- (14) 2 each LST1U-072/7 termination shelf (106722)
- (15) 2 packs 1000ST panels (1076730)
- (16) 1 each 4" core drill

c. Schedule: The completion of this effort shall be (8) eight weeks after the receipt of a signed Modification.

### 3. SWR XJCS 3N44 00

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to install fiber and copper cable between B3225A and B3225 to B4010 to support communications for NASA as identified in OAO proposal dated August 19, 2003.

- a. The contractor shall perform the following tasks:
- (1) Install (1) 24mm/24sm fiber cable from B3225A & B3225B to B4010.
  - (2) Install (1) 24mm/12sm fiber cable from B3225A & B3225B to B4010 for PTD networks and cameras.
  - (3) Install (1) 900-pair copper cable from B3225B to B4010 to be used for telephones.
  - (4) Install (1) 300-pair copper cable from B3225B to B3225A to be used for telephones.
  - (5) Install (2) 19" x 84" aluminum equipment racks at B3225A and B3225B to hold network hubs and associated hardware.
  - (6) Install (4) LGX panels in B3225B, (2) LGX panels in B3225A and (2) LGX panels in B4010 for the fiber cables.
  - (7) Install double sided vertical troughs on the 19" aluminum equipment racks in B3225A & B3225B.
  - (8) Terminate all the fiber into ST connectors and put in LGX panels at all three buildings.
  - (9) Make a 900-pair copper cable splice in (3) man holes.
  - (10) Make (2) 900-pair copper building splices at B4010.
  - (11) Make (1) 900-pair copper building splice at B3225B and (1) 300-pair copper building splice.
  - (12) Make (1) 300-pair copper building splice at B3225A.
  - (13) Mount (9) 100-pair copper station protectors at B4010 and ground to an approved ground.
  - (14) Mount (12) 100-pair copper station protectors at B3225B and ground to an approved ground.
  - (15) Mount (3) 100-pair copper station protectors at B3225A and ground to an approved ground.
  - (16) Mount 110 wiring blocks and 188 backboards in B3225A, B3225B and B4010 to terminate station protectors on.
  - (17) Terminate (9) 100-pair cables from the station protectors on 110 wiring blocks in B4010
  - (18) Terminate (12) 100-pair cables from the station protectors on 110 wiring blocks in B3225B.
  - (19) Terminate (3) 100-pair cables from the station protectors on 110 wiring blocks in B3225A.

- (20) Install heat shrink splice closures in the manholes to keep water out.
- (21) Install metal splice closures in each building to protect the cables.
- (22) Test and label fiber cables at all buildings.
- (23) Test and label copper cable at all buildings.

b. The contractor shall provide the following materials:

- (1) 3,100 feet of 24mm/24sm fiber cable (370-342-HYBRIA-24/24)
- (2) 3,100 feet of 24mm/12m fiber cable (370-342-HYBRIA-24/12)
- (3) 2,500 feet of filled 900-pair copper cable (E-090024DFC)
- (4) 1,500 each 3B1E-W protector units (105114)
- (5) 900 each 4B1E-W protector units (104878)
- (6) 400 feet of 300-pair filled copper cable (E-030024DFC)
- (7) 336 each cool cure consumables (142172)
- (8) 220 feet of 900-pair ARMM copper cable (CMR-090024EAA)
- (9) 216 each 710SC1-25 splice module (053938)
- (10) 192 each P2020C-C-125 multimode ST connectors (118974)
- (11) 192 each C2000A multimode ST couplers (088987)
- (12) 144 each P3020A-C-125 singlemode ST connectors (157475)
- (13) 144 each C3000A-2 singlemode ST couplers (105263)
- (14) 48 packs 110C-5 connectors (061268)
- (15) 18 each 190A1-100 protectors (057030)
- (16) 9 each 3M encapsulant 3000 grams (105543)
- (17) 8 each LST1U-072/7 termination shelf (106722)
- (18) 8 packs 1000ST panels (106730)
- (19) 8 each 110AW2-300 wiring blocks (154071)
- (20) 8 each 188B2 backboards (112052)
- (21) 6 each double sided vertical troughs (166031)
- (22) 4 each 19" x 84" aluminum equipment rack (143592)
- (23) 4 each 21C1 splice closure (096338)
- (24) 3 each heat shrink closure (132811)

c. Schedule: The completion of this effort shall be (12) twelve weeks after the receipt of a signed Modification.

4. Part II "Contract Administration Data", Item 4, is revised as indicated below to incorporate the increase of \$197,546.11 for these infrastructure upgrades:

**ESTIMATED TOTAL (through Mod 94)**

Ordered Seats and Services	\$ 7,856,849.22
Catalog Actuals	\$ 413,263.93
Specialized Services Actuals	\$ 8,850.00
Infrastructure upgrades	\$ 2,410,820.01
Fast Track Mods Authorized	\$ -
Subtotal	\$ 10,689,783.16
Less credits	\$ (2,625.55)
Less retainage not earned	\$ (74,871.83)
Subtotal	\$ 10,612,285.78
Seats/service levels projected through 11/30/04	\$ 5,764,041.81
<b>Total Estimated Delivery Order Value</b>	<b>\$ 16,376,327.59</b>

5. Part V "Technology Infusion (Infrastructure Upgrades)", Item 2 is modified to include the subject infrastructure upgrades. The signed date and completion date will be completed in a future infrastructure upgrade modification.

Mod No.	Description	Date Signed	Date Completed	Amount
96	XJCS 3N43 Install (1) 48 singlemode/24 multimode fiber cable from B1201 to B3225B to support communications for NASA			\$82,198.22
96	XJCS 3N44 00 Install fiber and copper cable between 3225A and B3225B to B4010 to support communications for NASA			\$115,347.89

6. Payment Schedule: Invoicing and Payment for this modification will be made in accordance with Master Contract NAS5-98144, FAR 52.212-4: Commercial Items (May 1997) (Modified).
7. Reporting requirements: The contractor shall provide monthly status reports to the SSC Alternate DOCOTR, with a copy to the DOCO. These reports shall include, as a minimum, installation progress, and potential problem areas.
8. In consideration of the modification agreed to herein as complete equitable adjustment for the changes set forth, the Contractor hereby releases the Government from any and all liability under this delivery order for further equitable adjustments attributable to such facts or circumstances giving rise to these changes.
9. All other terms and conditions of this Delivery Order remain unchanged and in full force and effect.